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end provided with a protrusion directed toward said susceptor; wherein a peripheral portion of a lower surface of said susceptor being formed with depressions, each said depression having an inside diameter substantially identical to an outside diameter of said protrusion, adapted to engage said protrusion, wherein each of said depressions extend in a radial direction of said susceptor, and wherein a bottom portion of each of said depressions extends along a direction substantially parallel to a plane defined by at least one of a top surface of said susceptor or a bottom surface of said susceptor so as to permit movement of said susceptor in a substantially radial direction relative to said protrusions along said depressions.

4. A semiconductor production apparatus according to claim 3, wherein said protrusions are configured to engage said depressions on outer peripheral sides thereof at ambient temperature.

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5. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises graphite.

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6. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises graphite having a surface coated with silicon carbide.

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11. A semiconductor production apparatus according to claim 1, wherein said arms incline upward as said arms extends radially outward.

Please add the following new claims:

--12. A semiconductor production apparatus according to claim 1, wherein said depressions are disposed at equally spaced intervals in a circumferential direction of said susceptor.

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13. A semiconductor production apparatus according to claim 1, wherein each of said depressions has an elongated form extending in said radial direction.

14. A semiconductor production apparatus comprising:
a processing chamber;
a susceptor disposed within said process chamber and having an upper surface for mounting a semiconductor wafer thereon;

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a support shaft disposed within said process chamber for supporting said susceptor; and
a heating source disposed so as to heat the wafer mounted on said susceptor, wherein said susceptor has a plurality of depressions formed in a lower surface thereof;

wherein said support shaft has a main shaft positioned coaxial with a center of said susceptor, and a plurality of arms radially extending from an upper end of said main shaft, each of said arms having a distal end provided with a protrusion extending upward, said protrusions correspondingly engaged in the associated depressions such that said protrusions can slide along said depressions only in a substantially radial direction of said susceptor.

15. A semiconductor production apparatus according to claim 14, wherein said susceptor has a coefficient of thermal expansion greater than that of said support shaft.

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16. A semiconductor production apparatus according to claim 15, wherein said protrusions are engaged in said depression on the outermost peripheral side thereof, respectively, at ambient temperature.

17. A semiconductor production apparatus according to claim 14, wherein said arms incline upward as said arms extend radially outward.

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cont
18. A semiconductor production apparatus according to claim 14, wherein said depressions are disposed at equally spaced intervals in said circumferential direction.

19. A semiconductor production apparatus according to claim 14, wherein each of said depressions has an elongated form extending in said radial direction.

20. A semiconductor production apparatus according to claim 14, wherein said depressions formed in a lower surface of said susceptor are disposed adjacent an outer peripheral side thereof.--